AMENDMENTS TO THE CLAIMS

The following listing of claims replaces all prior versions and listings of claims:

Claims 1-15 (canceled).

16.   (original) A method for managing a distributed transaction comprising one or more transaction flows between respective pairs of nodes in a network of interconnected nodes, each of said transaction flows being accompanied by an originating node identifier identifying the originating node, said method being performed by one of said nodes as a local node and comprising the steps of:

maintaining a registry comprising zero or more entries corresponding to inbound flows from other nodes, each of said entries containing the originating node identifier accompanying the corresponding inbound flow and a local node identifier identifying the local node, said local node identifier being used to identify the local node in outbound transaction flows to other nodes resulting from said inbound flow;

upon receiving an inbound flow from another node, determining whether there is an entry in said registry for the originating node identifier accompanying said inbound flow;

if there is no entry for said originating node identifier and there is no entry for another inbound flow for the same transaction, creating an entry in said registry containing said originating node identifier and a local node identifier identifying the local node; and

if there is no entry for said originating node identifier and there is an entry for another inbound flow for the same transaction, creating an entry in said registry containing the originating node identifier accompanying said inbound flow and a local node qualifier identifying the local node that is different from any other local node identifier in said registry for that transaction.

17.   (original) The method of claim 16 in which said local node identifier contains an index portion that is incremented from a previous value if there is no entry for

said originating node identifier and there is an entry for another inbound flow for the same transaction.

18.   (new) A method for providing a path-sensitive branch registry for cyclic distributed transactions, comprising:

receiving a flow from a superior node in a cyclic distributed transaction tree, the flow including a global tree identification and a branch qualifier;

for each subordinate node in the transaction tree:

searching a registry of the subordinate node for the global tree identification and the branch qualifier;

if the global tree identification and the branch qualifier is not found in the registry:

assigning a unique transaction branch qualifier to the flow; and

sending the flow and the unique transaction branch qualifier to another subordinate node; and

if the global tree identification and the branch qualifier is found in the registry, sending the flow to an other subordinate node; and

sending confirmation from each subordinate node of a subordinate relational status to the superior node.

19.   (new) The method of claim 18, wherein the global tree identification identifies a transaction and the branch qualifier identifies a node in the transaction tree.

20.   (new) The method of claim 18, wherein the assigning a unique transaction branch qualifier to the flow includes updating the registry of the subordinate node.

21.   (new) The method of claim 18, wherein the flow includes syncpoint cues.

22.   (new) The method of claim 21, wherein the superior node includes a transaction manager, the transaction manager linking the syncpoint cues with the branch qualifier and the global transaction identification.

23.   (new) The method of claim 18, wherein each of the subordinate nodes include a transaction manager, the transaction manager of the subordinate nodes receiving syncpoint cues for the super node and sending confirmation to the superior node of the

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subordinate relational status.

24.   (new) The method in claim 23, wherein said superior node and said subordinate node recognize relational status based on said syncpoint cues linked with said branch qualifier and said global transaction identification; wherein said branch qualifier is established and unique for the life of the transaction.

25.   (new) The method in claim 23, wherein said subordinate relational status is updated based on the flow of said syncpoint cues.

26.   (new) A system for utilizing a path-sensitive branch registry for cyclic distributed transactions, the system comprising:

a plurality of nodes in a cyclic distribution tree, the plurality of nodes include a superior node and subordinate nodes;

a flow initiated by the superior node and received by a first of the subordinate nodes, the flow including a global tree identification and a branch qualifier;

wherein for each subordinate node in the transaction tree:

a registry of the subordinate node is searched for the global tree identification and the branch qualifier;

if the global tree identification and the branch qualifier is not found in the registry:

a unique transaction branch qualifier is assigned by the subordinate node to the flow; and

the flow and the unique transaction branch qualifier is sent by the subordinate node to an other subordinate node; and

if the global tree identification and the branch qualifier is found in the registry, the flow is sent by the subordinate node to an other subordinate node; and

a confirmation is sent from each subordinate node of a subordinate relational status to the superior node.

27.   (new) The system of claim 26, wherein the global tree identification identifies a transaction and the branch qualifier identifies a node in the transaction tree.

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28.   (new) The system of claim 26, wherein the assigning a unique transaction branch qualifier to the flow includes updating the registry of the subordinate node.

29.   (new) The system of claim 26, wherein the flow includes syncpoint cues.

30.   (new) The system of claim 29, wherein the superior node includes a transaction manager, the transaction manager linking the syncpoint cues with the branch qualifier and the global transaction identification.

31.   (new) The system of claim 26, wherein each of the subordinate nodes include a transaction manager, the transaction manager of the subordinate nodes receiving syncpoint cues for the super node and sending confirmation to the superior node of the subordinate relational status.

32.   (new) The method in claim 31, wherein said superior node and said subordinate node recognize relational status based on said syncpoint cues linked with said branch qualifier and said global transaction identification; wherein said branch qualifier is established and unique for the life of the transaction.

33.   (new) The method in claim 31, wherein said subordinate relational status is updated based on the flow of said syncpoint cues.

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